

Risk-Based End States: Variance Appendix

There are no known variances between the Risk-Based End State (RBES) Vision and the baseline or regulatory documents. However, new information or regulatory direction could create variances. This appendix describes the assumptions used for the RBES Vision, the potential variances that could result from changes to these assumptions, and the risk of those changes.

The working LANL baseline contains the assumptions upon which the RBES Vision is based. These assumptions include appropriate land use for industrial mesa top areas, presumptive remedy of covers in place for all major Material Disposal Areas, no large clean ups in canyon areas or groundwater, and prioritization of sites—at both watershed and aggregate scale—based on risk (high risk sites addressed first). Some sites identified as potential release sites in the EM program are still being used for National Nuclear Security Administration (NNSA) operations and mission (for example, firing sites) and can not be remediated until NNSA no longer needs these sites for its mission. These sites are termed “active sites.” The RBES Vision assumes that active sites will not have been remediated at the end state. The assumption is that NNSA would remediate the sites when activities cease at them at some unknown future date. The baseline matches the commitments of the Performance Management (PMP) Strategy, most notably to complete ten MDAs by 2010, all sites in Los Alamos/Pueblo watershed by 2010, and all EM sites by 2015.

Further information or change in regulatory direction may lead to potential variances in the assumptions upon which the RBES Vision is based. These variances, and their risk, are detailed as follows.

- The RBES Vision assumes that all MDAs will be covered in place. However, this remedy may not be possible for MDA B based on additional characterization information. MDA B contains containerized liquids and cover stability may not be achievable. Should a different remedial alternative be determined to be appropriate for MDA B, a variance from the RBES assumption would result.
- New Mexico Environment Department (NMED) may not agree with the end state as described. The Consent Order currently allows for industrial scenarios, however all sites that have been completed and approved to date have been cleaned to residential levels. A change in NMED's position on allowing industrial level cleanups would lead to a variance.
- The D&D program plans for the removal of processed-contaminated facilities; many of which sit on top of and limiting access to legacy subsurface contamination whose cleanup is contained in the baseline. If the D&D program continues to remain unfunded, EM can not complete cleanup of the subsurface, and a variance will result.
- The RBES Vision assumes that LANL can control groundwater exposure at the supply wells and at the Laboratory boundary, and that no treatment of groundwater will be necessary. If NMED requires any regional groundwater to

meet groundwater standards, LANL may have to remediate groundwater, leading to a variance.

- The RBES Vision assumes that no remediation of alluvial waters will be necessary. No exposure route exists to alluvial waters on Laboratory property. However, should NMED define alluvial waters as groundwater and require the application of groundwater drinking standards to them, a large variance would result. In addition, San Ildefonso Pueblo (adjacent to the Laboratory boundary) potentially could place a shallow well in alluvial waters on Pueblo property and LANL would have no control over exposure at that point.
- The RBES Vision assumes that no remediation will be necessary for perchlorate in groundwater. However, perchlorate has been found in isolated alluvial and regional groundwater locations. A variance would result if NMED were to require cleanup for perchlorate in groundwater.

LANL has identified these risks in the current baseline, has developed a mitigation plan, and is managing them to minimize the potential of their occurrence.